

PROCEEDINGS  
OF THE  
BIOLOGICAL SOCIETY OF WASHINGTON

A NEW SUBSPECIES OF *MICROTUS OECONOMUS*  
FROM ALASKA

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In the course of field work sponsored by the Office of Naval Research in northern Alaska, during the summer of 1951 specimens of small mammals were obtained at several points on the Arctic Slope. Among these is a population of *Microtus oeconomus* that is recognizably distinct from other named kinds of the same species.

In the following description, capitalized color terms are from Ridgway (Color Standards and Color Nomenclature, 1912); all measurements are in millimeters.

This new vole is named for Dr. Raymond M. Gilmore. It may be called:

*Microtus oeconomus gilmorei* subsp. n.

*Type*.—Male, adult, skin and skull, United States National Museum No. 293109; Point Lay, (163° 04' W Long. and 69° 46' N Lat.), Alaska; obtained 4 July 1951, by H. W. Setzer, original No. 2396.

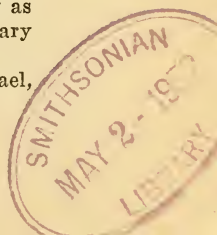
*Range*.—Arctic Slope of Alaska from Point Lay on the west, at least to Umiat on the east and from the Meade River on the north at least to the crest of the Brooks Range on the south.

*Specimens examined*.—54, all from Alaska: Point Lay, 27; Utukok River, 200 miles SW Point Barrow, 5; Mouth of Chandler River, 1; Anaktuvuk Pass, 16; Umiat, 2; Killik River, 3.

*Diagnosis*.—Entire upper parts between Snuff Brown and Bister with a moderate admixture of black hairs; color of upper parts shading into the grayish white color of the belly low on the sides; belly but lightly washed with buff; dorsal surfaces of hands and feet with a thin brownish line; tail with a blackish brown dorsal stripe, remainder buffy and with a small penicillate tip; soles and palms naked; all hairs plumbeous at base. Skull robust; zygomatic arches robust and rather angular anteriorly; rostrum rather broad; nasals quite flat and flaring anteriorly; posterior portion of skull broad and rather flat; auditory bullae well inflated ventrally; maxillary teeth heavy.

*Comparisons*.—*Microtus oeconomus gilmorei* differs from *Microtus oeconomus macfarlandi*, as known from the Anderson River, Northwest Territories, Canada, as follows: Color paler and more yellowish; auditory bullae sub-acute instead of rounded posteriorly and acute instead of sub-acute anteriorly, more inflated ventrally, thus presenting the appearance of a longer, narrower bulla; zygomatic arches flaring anteriorly as opposed to nearly parallel; upper incisors more recurved; maxillary teeth heavier; skull averages larger.

From *Microtus oeconomus operarius*, as known from St. Michael,



Alaska, *M. o. gilmorei* differs as follows: Color paler, more yellowish; tail somewhat shorter; auditory bullae larger and inflated instead of small and rather flattened, ventrally; longer heavier maxillary tooth-row; nasals wider anteriorly; interparietal generally narrower in width; skull larger in all measurements taken in animals of comparable age and sex.

*Measurements.*—Averages and extremes of four males and six females, all adult, from the type locality, are respectively: Total length 171.3 (161.0-181.0), 164.8 (159.0-170.0); length of tail 39.7 (37.0-45.0), 38.8 (35.0-42.0); length of hind foot 19.8 (18.0-21.0), 18.8 (17.0-20.0); length of ear from notch 13.3 (13.0-14.0), 13.0 (11.0-14.0); condylobasal length 27.8 (27.5-28.4), 26.8 (26.4-27.5); palatal length 15.1 (14.8-15.6), 14.6 (14.3-15.2); greatest zygomatic width 15.3 (14.6-15.9), 14.4 (13.8-14.9); least interorbital width 2.8 (2.7-2.8), 2.9 (2.7-3.1); length of nasals 6.95 (6.7-7.5), 6.5 (6.2-6.8); width of rostrum immediately anterior to zygomatic processes of maxillae 2.5 (2.4-2.6), 2.3 (2.0-2.5); greatest width of braincase 11.6 (11.2-11.8), 11.4 (10.6-11.9); alveolar length of maxillary toothrow 5.6 (5.5-5.8), 5.5 (5.2-5.7).

*Remarks.*—As is typical of the species *Microtus oeconomus* in North America, all specimens were taken in extremely wet tundra areas. The most numerous population was found at sea level at Point Lay but other specimens were obtained at an elevation of 2000 feet near Meat Mountain on the Utukok River and at a somewhat lower altitude at the mouth of the Chandler River.

Intergradation is demonstrated with *Microtus oeconomus macfarlani* in specimens obtained at and near Anaktuvuk Pass. This is evidenced by an intermediacy in the shape of the auditory bullae and length and robustness of the maxillary toothrow.

It is probable that the name *Microtus oeconomus endoeccus* Osgood is valid. This assumption is based on the examination and comparison of specimens from the Yukon drainage area which represent the subspecies *M. o. endoeccus*, and specimens from the Mackenzie area and the Anderson River country of Canada which represent the subspecies *M. o. macfarlani*. Certain characters of the toothrows, the auditory bullae and the zygomatic arches appear to separate the two populations, but until additional material, particularly that exhibiting a wider range of age groups, is available, it seems best to preserve the current nomenclatorial status of *M. o. endoeccus* as a synonym of *M. o. macfarlani*.